Index to Authors for Volume 69

(Capital letters indicate authors of main articles)

ADEY, P 17
AYRES, D. G. 417
Adds, J. N. 338, 520
Ainley, D. 76, 773
Allen, J. A. 503
Anderson, R. 770
Armstead, D. E. F. 527
Ashbourne, S. R. C. 503
Atkinson, W. H. 138
Auty, G. 791
Ayres, A. J. P. 337

BELL, J. F. 268
BENTLEY, D. 451
BLACK, D. 249
BOUNDS, C. L. 477
BROWN, C. 460
BUNYAN, P. 286
Bailey, M. 126
Bailey, D. 746
Barber, N. 546
Bendall, D. 512
Benfield, F. W. S. 90, 93
Betts, C. E. 87
Billett, E. H. 533, 752
Binney, D. A. 110
Black, D. 249
Blackwell, R. D. 729
Bloundele, V. 330
Bowron, G. 510
Brook, D. W. 575
Brown, D. H. 742
Brown, A. L. 742
Buck, M. 73
Burrows, J. S. 93

CARLETON, J. R. 50
CLEGG, A. 34
CLOUGH, E. E. 255
Campbell, R. 746
Casey, M. T. 78
Challenger, S. 300
Clinch, R. 76
Cook, D. 294
Cortel, A. 107

DICKER, R. J. 42
DOHERTY, M 28
Davies, T. H. 94
Dodds, C. J. 293

ELLSE, M. D. 241, 427
ETHERINGTON, J. R. 493
Elands, J. 508
Evans, J. D 358

Fellow, T. J. 522
Fernandez, L. 107
Frank, T. 334

GOTT, R. 217
GREEN, J. C. 483
Gailiunas, P. 121, 587
Gavin, P. J. 566
Gayford, C. G. 799
George, J. M. 815
George, W. O. 781
Giffould, G. D. 332, 751
Gillin, J. 789
Gomm, P. S. 530
Gullis, R. J. 61, 514
Gulliver, P. A. 737

HARGREAVES, D. H. 7
HODSON, D. 653
HOLLAND, D. 407
Hacker, R. G. 144
Hadfield, J. M. 755
Hancock, D. J. 753
Harris, F. 329
Harris, B. W. 524
Heaney, J. C. 123
Henson, R. M. 364, 760
Hill, E. C. 61
Hodson, D. 821
Houghton, F. D. 749
Hughes, C. J. 541
Hui, T. K. 290
Hutchinson, C. S. 749

JAMES, E. O. 648
JOHNSON, S. 268
Jackson, B. 809
Jenkins, R. M. 99
Jennings, D. 522
Jones, A. V. 134
Jones, R. A. 82

KELLY, A. 662
Kelly, P. 300
Khan, M. R. 349
Kinchin, I. M. 71, 733, 735
Knight, R 115
Kovacks, L. 590

Lees, A. M. 304
Leharne, S. 306
Lewis, J. 105
Lister, J. M. 91
Lock, R. 115, 341

MARSHALL, Lord 195
MASHITER, J. 446
MacInnes, I. 327
Maier, H. 508
Martin, N. L. 56
Masson, A. J. 84, 86
Meek, E. G. 531
Milward, C. A. 317
Mitford, H. 502
Moore, D. S. 308
Moran, S. P. 103
Murkett, A. J. 330
Murphy, G. A. 790
Murray, A. J. S. 729

NAPIER, J. 469
NICHOLLS, G. M. 477
Newman, M. 567
Newton, D. P. 826

OLIVER, J. G. 677
Oakey, S. H. L 312
Osborn, P. M. 142
Osborne, J. M. 787

PINCHING, A. J. 205
PLATT, Baroness 639
POLLARD, A. M. 701
Penman, D. A. 324, 573
Pennington, A. 79
Pockley, T. G. 82
Preece, G. S. 570, 744
Preece, P. F. W. 579

REID, D. J. 653, 821
ROSS, K. A. 438
Reed, N. V. 81, 540
Reiss, M. J. 71, 742
Rickayzen, M. 118
Robinson, G. 505

SANDERSON, P. L. 721
SAVOY, L. G. 713
SNOW, K. R. 692
SOLOMON, J. 249
Sainsbury, P. 68
Sargent, J. 802
Shannon, G. A. 536
Shaw, G. W. 56
Shone, J 518, 731
Siddons, J. C. 550, 561, 564
Slater, M. J. 753
Sleigh, J. 96
Smith, I. M. 110
Smith, K. L. 737
Somerfield, A. E. 316
Spencer, P. 740
Stephens, J. C. H. 762

TRESMAN, S. 687
TUNNICLIFFE, S. D. 277
Tall, G. 551
Taylor, A. D. 768
Thorp, B. 294
Tordoff, V. J. 540
Truran, R. 514
Tyson, D. R. 792

Valadon, L. R. G. 512

WARD, P. 677
WATTS, M. 451
WELFORD, A. G. 217
WOOLFSON, M. M. 228
Waddling, R. E. L. 555, 789
Walters, W. A. 772, 779, 780
Ward, A. 106, 323, 328, 338, 340, 548, 562, 745
Watkins, R. 126
Watkins, P. 547
Weston, R. G. 537, 758
White, G. E. 308
Wilson, G. 352
Winn, K. 120, 784
Wood, J. A. 80, 310
Wright, A. 320

SUBJECT INDEX

* Main article

AIDS and the AIDS virus (HIV)* 205
AIDS and morality 833
Acid-base equilibria 306
Acid rain 87
Acid rain 755
Aeronautics, Paper 106
Aggression, Territorial 518
Air, The weight of 600
Alchemy* 701
Aluminium can copper! 609
Amino'acids, A simple method for separating, from food 729
Amstrad, Printing chemical equations using 376
Amylase, A colorimetric assay for 737
Analogue calculator 337
Angular velocity and ω 598
Assessment of practical investigations 153
Assessment of observation* 217
Assessment of observation 832
Assessment scheme, graded (OCEA) 341
Assessment, GCSE biology practical 567
Assessment, Getting to grips with GCSE 792
Assessment, Computer-based and traditional 809
Autocatalysis, Monitoring 76

BBC micro, Interfacing 762
Balance, Simple things to test for 548
Basic oxygen steelmaking process* 483
Bee, Queen raising and swarm control 294
Beetles, *Bledius spectabilis*, A study of behaviour in 68
Biology, A reading list for A- and S-level, Part XIX 56
Biology, Practical, at A-level 799
Bouncing, a simple experiment 103
Boys' and girls' reactions to science lessons* 662
Brown-eyed children 742
Bubble-blower 340
Bubble, How to drive a car through a 562
Bunsen, Lighting a bunsen burner 371, 835

COMA (microcomputing acronyms) 839
Calcium, Colorimetric determination 530
Calcium sulphate, precipitation 770
Calculator, A simple analogue 337
Camphor duck, An electrostatic 546
Car, Estimating the weight of 329, 838
Car, How to drive through a soap bubble 562
Carbon assimilation pathways* 493
Catalase, Study of 290
Catalase, Investigating the effect of 570
Catalysis of the decomposition of hydrogen peroxide 84
Cells, Investigation of electrochemical 90
Cellular Modelling System* 407
Chatelier, Le, Illustration of Principle 533
Chemical, Balancing equations* 713
Chemistry, A new teaching aid for 768
Chemistry, A poly-choice test for 537
Children's scientific ideas* 255
Chlorophyll, the separation by paper chromatography* 512
Christmas, Physics for 608
Chromatography: An A-level exercise* 512
Chromatography, gas-liquid, A computer simulation of 758
Clathrate, Preparation and analysis of 536
Colorimeter 91
Colorimetric assay for the enzyme amylase 737
Colorimetric determination of calcium 530
Colouration, cryptic, survival value of 503
Combustion, Enthalpy of 540
Complex, The silver (I)-thiosulphate 86
Complexity-stability problem 731
Computer-infrared spectrometer compatibility 308
Computer-graphs in physics experiments 784
Computer-based and traditional assessment tests 809
Computer, Drug structures on 94
Computer: Programming function keys for WORDWISE 162
Computer, The production of spirograms using 164
Computer, A pneumograph for interfacing with 300
Computer simulation of Millikan's experiment 330
Computer, Illustration of Le Chatelier's Principle 533
Conductivities, Comparing 166
Content and process, in the sciences 836
Continuity and coherence in the science curriculum * 648
Cooling curves, Simulated, for eutectic point determination 310
Cooling, Behaviour of a metal bar on 835
Crosswords and word searches 610
Cryptic colouration, the survival value of 503
Crystals of lead iodide 312
Crystals, Spinning 165
Crystals, Salt 751
Current, Analogies for* 249
Curriculum, School, Quest for* 7
Curriculum developer's checklist 821
Curriculum, Continuity and coherence in* 648

Decomposition, Thermal, of lead nitrate 364, nitrate 760
Decomposition, Woodland* 469
Delivery tube, A milk-straw 167

Design an experiment to test a hypothesis 126
Dew point, Measurement of 334
Differentiation 352
Diffusion experiment, Bromine, An alternative to 752
Digestion using immobilized enzymes 740
Digital-to-analogue converter in making electrical measurements 773
Dispersal of spores by raindrops 502
Distance learning* 687
Domestic electricity, Teaching 789
Drug structures 94
Duckweed, Experimental method using 505
Dynamical modelling* 407

Earth, A phantom electrical 547
Earth, Spinning of 603
Ecology, Plant* 493
Electric fields, Radial 780
Electric current, Analogies for* 249
Electricity, Teaching domestic 789
Electrochemiluminescence 96
Electrochemical simulations 80
Electrochemical cells 90, 609
Electrolysis, Oxygen evolution during 93, 597
Electrolysis of water 157
Electrolysis 601
Electromagnetic waves along a wire 324
Electromotive force, confusion by 153
Electronics in terms of current paths* 241
Electroplating 79
Electrostatic motors, Contrarotating 338
Electrostatic camphor duck 546
Electrostatic levitation 787
Electrostatics. Two sorts of charge 607
Elodea, Collection of gas from 749
Energy. The high energy bond 370
Energy, Transferring not transforming* 427
Energy anarchy and matter scatter* 438
Energy. Is it a thing? 587
Energy: transfer or conversion? 602
Energy, Science and* 195
Enthalpy of combustion of alcohols 540
Entropy* 438
Environment and the rainbow 781
Enzyme kinetics 508
Enzymes. Study of catalase 290
Enzymes, Digestion using 740
Equal opportunities in science and engineering* 639
Equations, Balancing chemical* 713
Equations, Printing chemical 163
Equilibrium game, The 304
Ether, Measurement of dew point free of 334
Eutectic point determination 310
Evolution on the doorstep 510
Expansion of solids 374
Experiment, Exploiting at different levels 103
Experimental design 126
Experimental method using duckweed 505
Explorations, task-centred 802
Eye, Rods and cones in 71

Fermenter, Software controlled 514
Fields, Radial electric 780
Fire. Safety* 50
Food, Separating amino acids from 729
Formulae, Teaching aid for chemical 768
Fractionating column, Temperatures in 753
Freshwater invertebrate animals 71

Game theory, A brief look at 518
Garlic root tips, Mitosis in 338, 520
Gas-liquid chromatography, A computer simulation of 758
Gas chemistry 81
Gas, Collection of, from *Elodea* 749
GCSE and CSE Nuffield Physics* 477
GCSE assessment requirements 792
GCSE assessment practical on catalase 570
GCSE biology practical assessment 567
GCSE electronics in terms of current paths* 241
GCSE physics, An experimental design for 573
Gender, Sex and 837
Genetic studies of xanthic forms in guppies 293
Genetics. Colour of eyes 742
Girls' and boys' reactions to science lessons* 662
Girls learning physical science 144
Girls. Option choices* 268
Girls, Science and 599
Girls, Sciece education for* 28
Girls, Scientific education of 159
Graphs 320
Gravity, 'Artificial' 328
Growth, Measuring plant 742
Gut system, Invertase in 744

Haber process 524
Handicapped pupils, Science for 134
Heat changes, Electrical measurement of 82
Heat, Misconceptions in 154
Heating, Behaviour of a metal bar on 835
Hedgerow. Evolution on the doorstep 510
Hope's apparatus 156, 604
Humanized science 368
Hungary, Pupils' thinking about physical principles in 590
Hydrogen peroxide, Decomposition of 84
Hydrogenation 527

Imaginative science teacher 371
Imperial and metric systems of measurement 138
Implosion 323

Industrially-used resource materials in school science* 42
Infrared spectrometer 308
Interfacing the BBC micro 762
Interference of sound 107
Invertase in the gut system 744
Invertebrate animals, Freshwater, Key to 71
Investigation, Guided 370
Iodine, Use in diffusion experiment 752

Jamaica, Primary science in 149

Kenyan experience, Can we learn from? 575
Kinetic theory, The weight of air according to 118
Kinetics, Enzyme 508

Language, Scientific 587
Lead iodide, Single crystals of 312
Lead nitrate, Thermal decomposition of of 364, 760
Lead mining: pollution* 721
Levitation, Electrostatic 787
Logical thinking in science* 17
Lungs, Surface area of 73

Magnetic field patterns 790
Mass and weight 115
Measurement with a micro 555
Metric and imperial units 138, 600
Microbial activity 61
Microcomputer, Acid-base equilibria with 306
Microcomputing acronyms 839
Microcomputing in *SSR* 36
Microcomputer, Measurement with 555, 773
Microcomputer, Monitoring autocatalysis with 76
Microcomputer, Printing chemical equations using 163
Millikan's experiment 330, 550, 596
Mitosis in garlic root tips 338, 520
Mobile, An instructive 327
Modular science and technology* 460
Morality, AIDS and 833
Mosquito adults, Identification of* 692
Moss cushions, Tardigrade fauna of 733
Motor model 332

Nematodes in school biology 735
Neutralization 93
Nigeria, School science achievement in 349
Nitrates, Action of heat on 154, 155
Nuclear issue 369, 595, 834
Nuclear power industry 835
Nuffield Physics for the average pupil* 477

OCEA. A graded assessment scheme in science 341
OHP. Use of to demonstrate electron transfer 78
Observation, The assessment of, in science* 217
Observation, The assessment of, in science 832
Ohm, An experiment 561
Option choices, Gender differences in science* 268
Organic chemistry, The teaching of 575
Oscillating chemical reactions 522
Osmosis and square balloons 56
Oxygen evolution during electrolysis 93, 597

Perception, Vision and 551
pH electrodes. Determination of silver ion by 531
pH. Three colourful experiments 316
pH, To generate solutions of different 373
Photograms, Reversing 330
Physics. The potentiality of distance learning* 687
Physics, Computer-produced graphs in 784
Pitot-static tube 791
Plant growth, Measuring 742
Pneumograph, for interfacing 300
Pollution detectives. Lead and zinc mining* 721
Poly-choice test for chemistry 537
Pond, Safety and the school* 286
Potassium, Radioactive 566
Practical biology at A-level 799
Precipitation of calcium sulphate 770
Presidential address: Equal opportunities in science and engineering 639
Presidential address: Science and energy* 195
Pressure, An electronic gauge 105
Pressure. VELA updates of two old favourites 120
Primary science in Jamaica 149
Primary school, Encouraging science hypotheses in 358
Primary science and girls' and boys' interest later* 417
Principia, A page from 564
Process and content in the sciences 836

Quincke's tube, A version of 779
Quinhydrone half cell 80

Radar sets, Enhanced growth around 167
Radio to x-rays 599
Radio broadcasts, Imaginative use of * 677
Radioactive potassium 566
Rain, Acid 87
Rainbow and the environment 781
Reactions, Oscillating chemical 522
Reading list for A- and S-level biology. Part XIX 56

Redox reactions and electron transfer 78
Relevance of science teaching: the SATIS material 826
Religion: Another light has come 833
Research in science education 579
Research facilities for sixth-formers 838
Resonance, Investigations of 317
Rods and cones in the human eye 71
Rural science as part of the curriculum? 123
Rusting 164

SATIS material, a look at 826
SHM and ω, Going round in circles with 110
Safety VII: Fire* 50
Safety VIII: Safety and the school pond* 286
Saliva as a lubricant 163
Salt crystals really are cubical 751
Sand on a balance, The impact of 772
Science and logical thinking* 17
Science, Making sense of 121
Science for all* 653
Science education, Research in 579
Scientific ideas*, 255
Seed packets as a source of data for GCSE 746
Sermon: The light has come 364
Sex and gender 837
Sexism, Countering in the curriculum 160
Sexist language in science teaching 837
SHM 110, 598
Sig Tests in investigating microbial activity 61
Silver ion, Determination of 531
Sixth-formers, Research facilities for 838
Software for chemists, Educational 607
Software laboratory: the Cellular Modelling System* 407
Solar system, The origin and evolution of* 228
Special needs, Science for pupils with 134
Special needs, Science for pupils with* 277
Speed of electromagnetic waves 324
Spinning crystals 165
Spirograms using a microcomputer 164
Spores, Dispersal of, by raindrops 502
Spreadsheets in science teaching 142
Stability-complexity problem 731
Stage lighting 373
Steelmaking, The basic oxygen process* 483
Stoichiometry. Three experiments 316
Storm bottle 604
Strain and its measurement 99
Strain gauge transducer 541
Superconductor, Making a "hot" 372
Surface area of the lungs 73
Swarm control and queen bee raising 294

Tardigrade fauna of moss cushions 733
Task-centred explorations 802
Technology in schools 34
Technology, The role of in science education 815
Television, Opinions of* 451
Terminology 606
Textbook, The role of a 597
Thiosulphate-silver (I) complex 86
Transducer, a simple strain gauge 541
Turbidity sensor 514

Units, Imperial and metric 600

VELA updates of two old favourites 120
Vialls, Arthur. An appreciation 363
Video, Interactive, in science* 446
Vision and perception 551

Wallace AR, and the size of the earth 166
Water, The electrolysis of 157
Weight and mass 115
Weight of a car 838
Weightlessness on planets of different sizes 165
West Germany, Ideas from: IX. Acid rain 755
Wind force and velocity 605
Wind. The pitot-static tube 791
Woodland decomposition* 469
WORDWISE, Further comments on 374
WORDWISE, Programming function keys for 161

X-rays, From radio to 599
Xanthic forms in guppies 293

ASE Journals Index on disc

As a service to members, full indexes of all the Association's journals are now available on 5¼" computer disc suitable for the BBC series of microcomputers. The disc for the current volume is now available from Headquarters price £8.05 including post and packing. Back issues are available at the same price as follows.

8687 All the Association's journals for 1986–87
8586 All the Association's journals for 1985–86
8385 All the School Science Reviews for 1983–85
(2 years in slightly less detail)